ANNALS of PHYSICS

Editor

Philip M. Morse

Assistant Editors

Bernard T. Feld Herman Feshbach Richard Wilson

Editorial Council

A. Abragam
J. Bardeen
D. A. Bromley
S. D. Drell
W. M. Fairbank
V. L. Fitch
J. L. Greenstein
P. C. Martin
J. Schwinger
I. Talmi
V. L. Telegdi
V. F. Weisskopf
E. P. Wigner
D. H. Wilkinson
A. Zichichi

VOLUME 95
1975

ACADEMIC PRESS
New York and London
A Subsidiary of Harcourt Brace Jovanovich, Publishers

Copyright © 1975 BY ACADEMIC PRESS, INC.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

Printed by the St. Catherine Press, Ltd. Bruges, Belgium

ANNALS OF PHYSICS 95, (1975)

CONTENTS OF VOLUME 95

NUMBER 1, NOVEMBER 1975

WICK HAXTON AND REMO RUFFINI. Absorption and Defocusing of Electromagnetic Radiation by a Schwarzschild Black Hole 1
DAVID A. DAHL. Theory of a Condensed Charged-Bose, Charged-Fermi Gas 10
N. AUERBACH AND A. YEVERECHYAHU. Nuclear Viscosity and Widths of Giant Resonances 35
BRANDON CARTER. Application of Continuous Variation Formulas and Discrete Invariance Principles to Black Holes and Neutron Star Models 53
B. CARTER AND H. QUINTANA. Relativistic Formulation of the Neutron Starquake Theory of Pulsar Glitches 74
K. K. MON AND J. B. FRENCH. Statistical Properties of Many-Particle Spectra 90
B. K. AGARWAL. Composite Nucleon Approach to the Deuteron Problem 112
H. BANERJEE, B. DUTTA-ROY, AND S. K. SHARMA. Corrections to the Glauber Multiple Scattering Series 127
M. MOSHINSKY, J. PATERA, R. T. SHARP, AND P. WINTERNITZ. Everything You always Wanted to Know about $SU(3) \supset O(3)$ 139
J. L. FRIAR. Low-Energy Theorems for Nuclear Compton and Raman Scattering and $O^+ \to O^+$ Two-Photon Decays in Nuclei 170
K. D. ROTHE AND I. O. STAMATESCU. Study of a Two-Dimensional Model with Axial–Current–Pseudoscalar Derivative Interaction 202
ABSTRACTS OF PAPERS TO APPEAR IN FUTURE ISSUES 227

NUMBER 2, DECEMBER 1975

B. JENSEN. The Quantum Mechanical Extension of the Boltzmann Transport Equation and Optical Absorption in Semiconductors 229
J. C. STODDART. Finite Concentrations of Localized Moments in Metals 267
N. P. GUPTA AND P. K. GARG. Dispersion of Phonons in Molecular Solids by an Anharmonic Rigid-Atom Model 281
P. AMIOT AND J. J. GRIFFIN. Constraints in Quantum Mechanics via Lagrangians, Hamiltonians, and Canonical Equations of Motion . . . 295

D. B. Ion. Saturation of Isopin Bounds and Constraints on Experimental Data and Amplitude Analysis in π N-Scattering 308
W. von Oertzen and E. R. Flynn. Test of the Generalized Pauli Principle and of Supermultiplet Symmetry in the Reactions $t + {}^9\mathrm{Be} \rightarrow {}^6\mathrm{Li} + {}^6\mathrm{He}$, ${}^6\mathrm{Li}^*_{0^*} + {}^6\mathrm{He}$ 326
F. Lenz. Nonstatic Theory of Pion-Nucleus Scattering 348
David L. Weaver. A Comment on Relativistic Hamiltonian Equations for Any Spin 421
B. Jouvet. Electrodynamic Interpretation of Neutral Interactions of the Neutrinos 424
E. A. Remler. Use of the Wigner Representation in Scattering Problems 455
J. V. Narlikar. Action and Reaction in the Theories of Direct Interparticle Action 496
John D. Lathrop. On Synge's Covariant Conservation Laws for General Relativity 508
Abstracts of Papers to Appear in Future Issues 518
Author Index 520
Cumulative Subject Index of Volumes 89–95 521